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12 DEC 2001

09/857346

<110> Commonwealth Scientific and Industrial Research Organization

<120> Control of Flowering

<130> FP14526

<140> US 09/857,346

<141> 2001-06-04

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<150> PCT/AU99/01079

<151> 1999-12-02

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gctttccgtt ctctgtgacg catccgtcgc tcttcttgtc gtctccgcct ccgggaaact	240
ctacagcttc tctccgggtg ataacctggt caagatcctt gatcgatatg gaaagcaaca	300
tgatgatgat cttaaagcct tggatcgtca gtcaaaagct ttggactgtg gttcacacca	360
tgagctactg gaacttgtgg aaagcaagct tgaggaatca aatgtcgata atgtaagtgt	420
gggttccttg gttcagctgg aggaacacct tgagaacgcc ctctccgtaa caagagctag	480
gaagacagaa ctaatgttga agcttgtcga gaaccttaaa gaaaaggaga agttgctgga	540

agaggagaac catgttttgg ctagccagat ggagaagagt aatcttgtgc gagccgaagc 600
 tgataatatg gatgtctcac caggacaaat ctccgacatc aatcttccgg taacgctccc 660
 actgcttaat tagtcacctt taatcggcga ataaataaaa tccaaaacat ataactaaaa 720
 caaacaagat gtgtaattat ccccttgtaa aggggtgtacg ttgtataatc tatactctct 780
 ctccggctcg agaggcttcg ggtgtaaaac tatttcagat ttatgtaaga tagaaaatct 840
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<210> 10

<211> 792

<212> DNA

<213> Brassica napus

<220>

<221> Unsure

<222> (619)..(619)

<223> Unknown

<400> 10

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 tcgtcagctt tcagttctct gcgatgcac cgtcgctctt ctcgttgtct cagcctccgg 180
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 acaccatgag ctactagagc ttgtcgaaag taagcttgtg gaatcaaatt ctgatgtaag 360
 cgtcgactcc ctcgttcagc tggaggacca ccttgagact gccctctccg taactagagc 420
 taggaagaca gaactaatgt tgaagcttgt tgatagcctc aaagaaaagg agaaattgct 480
 gaaagaagag aaccaggggt tggctagcca gatggagaag aataatcttg cgggagccga 540
 agctgataaa atggagatgt cacctggaca aatctctgac atcaatcgtc cggttaactct 600
 ccgactgctt tattagccnc cttaagtcca aaacttgtga ctaaaaacaa aaataagtta 660

tcgaactatt cccctataag ggtgaacggt gtatatcttc attctctctg gctgagagac 720
cccgtgtgta aaactatggt tagatttaag taaaaatata tatttaagac atactaaaaa 780
aaaaaaaaaa aa 792

<210> 11

<211> 990

<212> DNA

<213> Brassica napus

<400> 11

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aaagctcgtc agctttctgt tctctcgat gcacccgtcg cgttctctgt tgtctcctcc 180
tccggcaagc tctacagctt ctccgccggt gataacctgg tcaggatcct tgatcgatat 240
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ggttcacaca atgagttact tgaacttgtg gatagcaagc ttgtggaatc aaatgtcggg 360
ggtgtaagcg tggacaccct cggtcagctg gaggggtgtc ttgaaaatgc cctctctcta 420
actagagcta ggaagacaga actaatgttg aagcttggtg atagcctcaa agaaaaggag 480
aagctgctga aagaagagaa tcaggctttg gctggccaga aggagaagaa gaatcttgcg 540
ggagccgaag ctgataatat ggagatgtca cctggacaaa tctccgacat caatcttccg 600
gtaactctcc cactgcttaa ttagccaccg ttagacgggg ctgatcaaat taaaaaatcc 660
aaaacataca actaaataaa taagctttgt tgtttttcac ccttgaaggg tgcacgttgt 720
atatctcaat actcccttgg ctgagagatt gtgtgtttac tcctatgtta gatataatga 780
gtaaaataaa aataaaaaga tctttgtacc ttcgtcgaga gagaattgta gtgagtgtgc 840
ttgtgtgttc tttttctctt ctttgcttca tggcgaagaa gcctaccgtc taatttgtaa 900
cggagacgtg gccctctctg ccttttgta ttcgtaattc ctttgtattt atccacaacg 960
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<210> 12

<211> 780

<212> DNA

<213> Brassica napus

<220>

<221> Unsure

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<223> Unknown

<220>

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<222> (779) .. (779)

<223> Unknown

<400> 12

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gagaaagctc gtcagctttc agttctctgc gatgcatccg tcgctcttct cgttgtctca	180
gcctccggca agctttacaa cttctccgcc ggcgataacc tggtaagat ccttgatcga	240
tatggaaaac aacatgctga tgatcttaaa gctctggatc ttcagtcaaa agctccgaag	300
tatggttcac accatgagct actagagctt gtcgaaagta agcttggtga atcaaattct	360
gatgtaagcg tcgactccct cggtcagctg gaggaccacc ttgagactgc cctctccgta	420
actagagcta ggaagacaga actaatgttg aagcttggtg atagcctcaa agaaaaggag	480
aaattgctga aagaagagaa ccagggtttg gctagccaga tggagaagaa taatcttgcg	540
ggagccgaag ctgataaaat ggagatgtca cctggacaaa tctctgacat caatcgtcg	600

gtaactctcc gactgcttta ttagccacct taagtccaaa acttgtgact aaaaacaaaa 660
 ataagttatc gaactattcc cctataaggg tgaacgttgt atatcttcat tctctctggc 720
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<210> 13

<211> 845

<212> DNA

<213> Brassica napus

<400> 13
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 agttaccttc tctaaacgac gcaacggtct catcgagaaa gctcgtcagc tttccgttct 180
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 ctccggtgat aacctgggtca agatccttga tcgatatgga aagcaacatg atgatgatct 300
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 acttgtggaa agcaagcttg aggaatcaaa tgtcgataat gtaagtgtgg gttccctggt 420
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 aatgttgaag cttgtcgaga accttaaaga aaaggagaag ttgctggaag aggagaacca 540
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 gtcaccttta atcggcgaat aaataaaatc caaaacatat aactaaaaca aacaagatgt 720
 gtaattatcc ccttgtaaag ggtgtacgtt gtataatcta tactctctct ccggctcgag 780
 aggcttcggg tgtaaaacta tttcagattt atgtaagata gaaaatctat gcaagacact 840
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<210> 14

<211> 825

<212> DNA

<213> Brassica napus

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 gtcaccttct ccaaacgacg caatgggtctc atcgagaaag ctcgtcagct ttcagttctc 180
 tgcgatgcat ccgtcgctct tctcgttgtc tcagcctccg gcaagcttta caacttctcc 240
 gccggcgata acctgggtcaa gatccttgat cgatatggaa aacaacatgc tgatgatctt 300
 aaagctctgg atcttcagtc aaaagctccg aagtatgggt cacaccatga gctactagag 360
 cttgtcgaaa gtaagcttgt ggaatcaaat tctgatgtaa gcgtcgactc cctcgttcag 420
 ctggaggacc accttgagac tgccctctcc gtaactagag ctaggaagac agaactaatg 480
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 ttggctagcc agatggagaa gaataatctt gcgggagccg aagctgataa aatggagatg 600
 tcacctggac aaatctctga catcaatcgt ccggttaactc tccgactgct ttattagcca 660
 ccttaagtcc aaaacttgtg actaaaaaca aaaataagtt atcgaactat tcccctataa 720
 ggggtgaacgt tgtatatctt cattctctct ggctgagaga ccccggtgtgt aaaactatgg 780
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<210> 15

<211> 891

<212> DNA

<213> Brassica napus

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 cttgtggaaa gcaagcttga ggaatcaaat gtcgataatg taagtgtggg ttccctgggt 420

cagctggagg aacaccttga gaacgcctc tccgtaacaa gagctaggaa gacagaacta 480
atgttgaagc ttgtcgagaa ccttaaagaa aaggagaagt tgctggaaga ggagaaccat 540
gttttggcta gccagatgga gaagagtaat cttgtgagag ccgaagctga taatatggat 600
gtctcaccag gacaaatctc cgacatcaat cttccggtaa cgctcccact gcttaattag 660
tcacctttaa tcggcggaata aataaaatcc aaaacatata actaaaacaa acaagatgtg 720
taattatccc cttgtaaagg gtgtacgttg tataatctat actctctctc cggctcgaga 780
ggcttcgggt gtaaaactat ttcagattta tgtaagatag aaaatctatg caagacactt 840
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<210> 16

<211> 196

<212> PRT

<213> Brassica napus

<400> 16

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Arg	Gln	Val	Thr	Phe	Ser	Lys	Arg	Arg	Asn	Gly	Leu	Ile	Glu	Lys	Ala
			20					25					30		
Arg	Gln	Leu	Ser	Val	Leu	Cys	Asp	Ala	Ser	Val	Ala	Leu	Leu	Val	Val
		35					40					45			
Ser	Ala	Ser	Gly	Lys	Leu	Tyr	Asn	Phe	Ser	Ala	Gly	Asp	Asp	Leu	Val
	50					55					60				
Lys	Ile	Val	Asp	Arg	Tyr	Gly	Lys	Gln	His	Ala	Asp	Asp	Arg	Lys	Ala
65					70				75					80	
Leu	Asp	Leu	Gln	Ser	Glu	Ala	Pro	Lys	Tyr	Gly	Ser	His	His	Glu	Leu
				85					90					95	
Leu	Glu	Leu	Val	Glu	Ser	Lys	Leu	Val	Glu	Ser	Asn	Ser	Asp	Val	Ser
			100					105					110		
Val	Asp	Ser	Leu	Val	Gln	Leu	Glu	Asn	His	Leu	Glu	Thr	Ala	Leu	Ser
		115					120					125			
Val	Thr	Arg	Ala	Arg	Lys	Thr	Glu	Leu	Leu	Leu	Lys	Leu	Val	Asp	Ser
	130					135					140				
Leu	Lys	Glu	Lys	Glu	Lys	Leu	Leu	Lys	Glu	Glu	Asn	Gln	Gly	Leu	Ala

145 150 155 160

Ser Gln Met Glu Lys Asn Asn Leu Ala Gly Ala Glu Ala Asp Lys Met
 165 170 175

Glu Val Ser Pro Gly Gln Ile Ser Asp Ile Asn Cys Pro Val Thr Leu
 180 185 190

Pro Leu Leu Tyr
 195

<210> 17

<211> 196

<212> PRT

<213> Brassica napus

<400> 17

Met Gly Arg Lys Lys Leu Glu Ile Lys Arg Ile Glu Lys Asn Ser Ser
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Arg Gln Val Thr Phe Cys Lys Arg Arg Asn Gly Leu Ile Glu Lys Ala
 20 25 30

Arg Gln Leu Ser Val Leu Cys Glu Ala Ser Val Gly Leu Leu Val Val
 35 40 45

Ser Ala Ser Asp Lys Leu Tyr Ser Phe Ser Ser Gly Asp Arg Leu Glu
 50 55 60

Lys Ile Leu Asp Arg Tyr Gly Lys Lys His Ala Asp Asp Leu Asn Ala
 65 70 75 80

Leu Asp Leu Gln Ser Lys Ser Leu Asn Tyr Ser Ser His His Glu Leu
 85 90 95

Leu Glu Leu Val Glu Ser Lys Leu Val Glu Ser Ile Asp Asp Val Ser
 100 105 110

Val Asp Ser Leu Val Glu Leu Glu Asp His Leu Glu Thr Ala Leu Ser
 115 120 125

Val Thr Arg Ala Arg Lys Ala Glu Leu Met Leu Lys Leu Val Glu Ser
 130 135 140

Leu Lys Glu Lys Glu Asn Leu Leu Lys Glu Glu Asn Gln Val Leu Ala
 145 150 155 160

Ser Gln Ile Glu Lys Lys Asn Leu Glu Gly Ala Glu Ala Asp Asn Ile
 165 170 175

Glu Met Ser Ser Gly Gln Ile Ser Asp Ile Asn Leu Pro Val Thr Leu

180

185

190

Pro Leu Leu Asn
195

<210> 18

<211> 197

<212> PRT

<213> Brassica napus

<400> 18

Met Gly Arg Lys Lys Leu Glu Ile Lys Arg Ile Glu Asn Lys Ser Ser
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Arg Gln Val Thr Phe Ser Lys Arg Arg Ser Gly Leu Ile Glu Lys Ala
20 25 30

Arg Gln Leu Ser Val Leu Cys Asp Ala Ser Val Ala Leu Leu Val Val
35 40 45

Ser Ser Ser Gly Lys Leu Tyr Ser Phe Ser Ala Gly Asp Asn Leu Val
50 55 60

Arg Ile Leu Asp Arg Tyr Gly Lys Gln His Ala Asp Asp Leu Lys Ala
65 70 75 80

Leu Asn Leu Gln Ser Lys Ala Leu Ser Tyr Gly Ser His Asn Glu Leu
85 90 95

Leu Glu Leu Val Asp Ser Lys Leu Val Glu Ser Asn Val Gly Gly Val
100 105 110

Ser Val Asp Thr Leu Val Gln Leu Glu Gly Val Leu Glu Asn Ala Leu
115 120 125

Ser Leu Thr Arg Ala Arg Lys Thr Glu Leu Met Leu Lys Leu Val Asp
130 135 140

Ser Leu Lys Glu Lys Glu Lys Leu Leu Lys Glu Glu Asn Gln Ala Leu
145 150 155 160

Ala Gly Gln Lys Glu Lys Lys Asn Leu Ala Gly Ala Glu Ala Asp Asn
165 170 175

Met Glu Met Ser Pro Gly Gln Ile Ser Asp Ile Asn Leu Pro Val Thr
180 185 190

Leu Pro Leu Leu Asn
195

<210> 19

<211> 197

<212> PRT

<213> Brassica napus

<400> 19

Met Gly Arg Lys Lys Leu Glu Ile Lys Arg Ile Glu Asn Lys Ser Ser
1 5 10 15

Arg Gln Val Thr Phe Ser Lys Arg Arg Asn Gly Leu Ile Glu Lys Ala
20 25 30

Arg Gln Leu Ser Val Leu Cys Asp Ala Ser Val Ala Leu Leu Val Val
35 40 45

Ser Ala Ser Gly Lys Leu Tyr Ser Phe Ser Ser Gly Asp Asn Leu Val
50 55 60

Lys Ile Leu Asp Arg Tyr Gly Lys Gln His Asp Asp Asp Leu Lys Ala
65 70 75 80

Leu Asp Arg Gln Ser Lys Ala Leu Asp Cys Gly Ser His His Glu Leu
85 90 95

Leu Glu Leu Val Glu Ser Lys Leu Glu Glu Ser Asn Val Asp Asn Val
100 105 110

Ser Val Gly Ser Leu Val Gln Leu Glu Glu His Leu Glu Asn Ala Leu
115 120 125

Ser Val Thr Arg Ala Arg Lys Thr Glu Leu Met Leu Lys Leu Val Glu
130 135 140

Asn Leu Lys Glu Lys Glu Lys Leu Leu Glu Glu Glu Asn His Val Leu
145 150 155 160

Ala Ser Gln Met Glu Lys Ser Asn Leu Val Arg Ala Glu Ala Asp Asn
165 170 175

Met Asp Val Ser Pro Gly Gln Ile Ser Asp Ile Asn Leu Pro Val Thr
180 185 190

Leu Pro Leu Leu Asn
195

<210> 20

<211> 196

<212> PRT

<213> Brassica napus

<400> 20

Met	Gly	Arg	Lys	Lys	Leu	Glu	Ile	Lys	Arg	Ile	Glu	Asn	Lys	Ser	Ser	
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Arg	Gln	Val	Thr	Phe	Ser	Lys	Arg	Arg	Asn	Gly	Leu	Ile	Glu	Lys	Ala	
			20					25						30		
Arg	Gln	Leu	Ser	Val	Leu	Cys	Asp	Ala	Ser	Val	Ala	Leu	Leu	Val	Val	
		35					40						45			
Ser	Ala	Ser	Gly	Lys	Leu	Tyr	Asn	Phe	Ser	Ala	Gly	Asp	Asn	Leu	Val	
	50					55						60				
Lys	Ile	Leu	Asp	Arg	Tyr	Gly	Lys	Gln	His	Ala	Asp	Asp	Leu	Lys	Ala	
65					70					75					80	
Leu	Asp	Leu	Gln	Ser	Lys	Ala	Pro	Lys	Tyr	Gly	Ser	His	His	Glu	Leu	
				85					90					95		
Leu	Glu	Leu	Val	Glu	Ser	Lys	Leu	Val	Glu	Ser	Asn	Ser	Asp	Val	Ser	
			100					105						110		
Val	Asp	Ser	Leu	Val	Gln	Leu	Glu	Asp	His	Leu	Glu	Thr	Ala	Leu	Ser	
		115						120						125		
Val	Thr	Arg	Ala	Arg	Lys	Thr	Glu	Leu	Met	Leu	Lys	Leu	Val	Asp	Ser	
		130				135						140				
Leu	Lys	Glu	Lys	Glu	Lys	Leu	Leu	Lys	Glu	Glu	Asn	Gln	Gly	Leu	Ala	
145					150						155				160	
Ser	Gln	Met	Glu	Lys	Asn	Asn	Leu	Ala	Gly	Ala	Glu	Ala	Asp	Lys	Met	
				165					170					175		
Glu	Met	Ser	Pro	Gly	Gln	Ile	Ser	Asp	Ile	Asn	Arg	Pro	Val	Thr	Leu	
			180					185						190		
Arg	Leu	Leu	Tyr													
			195													

<210> 21

<211> 197

<212> PRT

<213> Brassica napus

<400> 21

Met Gly Arg Lys Lys Leu Glu Ile Lys Arg Ile Glu Asn Lys Ser Ser
 1 5 10 15
 Arg Gln Val Thr Phe Ser Lys Arg Arg Ser Gly Leu Ile Glu Lys Ala
 20 25 30
 Arg Gln Leu Ser Val Leu Cys Asp Ala Ser Val Ala Leu Leu Val Val
 35 40 45
 Ser Ser Ser Gly Lys Leu Tyr Ser Phe Ser Ala Gly Asp Asn Leu Val
 50 55 60
 Arg Ile Leu Asp Arg Tyr Gly Lys Gln His Ala Asp Asp Leu Lys Ala
 65 70 75 80
 Leu Asn Leu Gln Ser Lys Ala Leu Ser Tyr Gly Ser His Asn Glu Leu
 85 90 95
 Leu Glu Leu Val Asp Ser Lys Leu Val Glu Ser Asn Val Gly Gly Val
 100 105 110
 Ser Val Asp Thr Leu Val Gln Leu Glu Gly Val Leu Glu Asn Ala Leu
 115 120 125
 Ser Leu Thr Arg Ala Arg Lys Thr Glu Leu Met Leu Lys Leu Val Asp
 130 135 140
 Ser Leu Lys Glu Lys Glu Lys Leu Leu Lys Glu Glu Asn Gln Ala Leu
 145 150 155 160
 Ala Gly Gln Lys Glu Lys Lys Asn Leu Ala Gly Ala Glu Ala Asp Asn
 165 170 175
 Met Glu Met Ser Pro Gly Gln Ile Ser Asp Ile Asn Leu Pro Val Thr
 180 185 190
 Leu Pro Leu Leu Asn
 195

<210> 22

<211> 196

<212> PRT

<213> Brassica napus

<400> 22

Met Gly Arg Lys Lys Leu Glu Ile Lys Arg Ile Glu Asn Lys Ser Ser
 1 5 10 15
 Arg Gln Val Thr Phe Ser Lys Arg Arg Asn Gly Leu Ile Glu Lys Ala
 20 25 30

Arg Gln Leu Ser Val Leu Cys Asp Ala Ser Val Ala Leu Leu Val Val
35 40 45

Ser Ala Ser Gly Lys Leu Tyr Asn Phe Ser Ala Gly Asp Asn Leu Val
50 55 60

Lys Ile Leu Asp Arg Tyr Gly Lys Gln His Ala Asp Asp Leu Lys Ala
65 70 75 80

Leu Asp Leu Gln Ser Lys Ala Pro Lys Tyr Gly Ser His His Glu Leu
85 90 95

Leu Glu Leu Val Glu Ser Lys Leu Val Glu Ser Asn Ser Asp Val Ser
100 105 110

Val Asp Ser Leu Val Gln Leu Glu Asp His Leu Glu Thr Ala Leu Ser
115 120 125

Val Thr Arg Ala Arg Lys Thr Glu Leu Met Leu Lys Leu Val Asp Ser
130 135 140

Leu Lys Glu Lys Glu Lys Leu Leu Lys Glu Glu Asn Gln Gly Leu Ala
145 150 155 160

Ser Gln Met Glu Lys Asn Asn Leu Ala Gly Ala Glu Ala Asp Lys Met
165 170 175

Glu Met Ser Pro Gly Gln Ile Ser Asp Ile Asn Arg Pro Val Thr Leu
180 185 190

Arg Leu Leu Tyr
195

<210> 23

<211> 197

<212> PRT

<213> Brassica napus

<400> 23

Met Gly Arg Lys Lys Leu Glu Ile Lys Arg Ile Glu Asn Lys Ser Ser
1 5 10 15

Arg Gln Val Thr Phe Ser Lys Arg Arg Asn Gly Leu Ile Glu Lys Ala
20 25 30

Arg Gln Leu Ser Val Leu Cys Asp Ala Ser Val Ala Leu Leu Val Val
35 40 45

Ser Ala Ser Gly Lys Leu Tyr Ser Phe Ser Ser Gly Asp Asn Leu Val
50 55 60

Lys Ile Leu Asp Arg Tyr Gly Lys Gln His Asp Asp Asp Leu Lys Ala
65 70 75 80

Leu Asp Arg Gln Ser Lys Ala Leu Asp Cys Gly Ser His His Glu Leu
85 90 95

Leu Glu Leu Val Glu Ser Lys Leu Glu Glu Ser Asn Val Asp Asn Val
100 105 110

Ser Val Gly Ser Leu Val Gln Leu Glu Glu His Leu Glu Asn Ala Leu
115 120 125

Ser Val Thr Arg Ala Arg Lys Thr Glu Leu Met Leu Lys Leu Val Glu
130 135 140

Asn Leu Lys Glu Lys Glu Lys Leu Leu Glu Glu Glu Asn His Val Leu
145 150 155 160

Ala Ser Gln Met Glu Lys Ser Asn Leu Val Arg Ala Glu Ala Asp Asn
165 170 175

Met Asp Val Ser Pro Gly Gln Ile Ser Asp Ile Asn Leu Pro Val Thr
180 185 190

Leu Pro Leu Leu Asn
195

<210> 24

<211> 196

<212> PRT

<213> Brassica napus

<400> 24

Met Gly Arg Lys Lys Leu Glu Ile Lys Arg Ile Glu Asn Lys Ser Ser
1 5 10 15

Arg Gln Val Thr Phe Ser Lys Arg Arg Asn Gly Leu Ile Glu Lys Ala
20 25 30

Arg Gln Leu Ser Val Leu Cys Asp Ala Ser Val Ala Leu Leu Val Val
35 40 45

Ser Ala Ser Gly Lys Leu Tyr Asn Phe Ser Ala Gly Asp Asn Leu Val
50 55 60

Lys Ile Leu Asp Arg Tyr Gly Lys Gln His Ala Asp Asp Leu Lys Ala
65 70 75 80

Leu Asp Leu Gln Ser Lys Ala Pro Lys Tyr Gly Ser His His Glu Leu
85 90 95

Leu Glu Leu Val Glu Ser Lys Leu Val Glu Ser Asn Ser Asp Val Ser
100 105 110

Val Asp Ser Leu Val Gln Leu Glu Asp His Leu Glu Thr Ala Leu Ser
115 120 125

Val Thr Arg Ala Arg Lys Thr Glu Leu Met Leu Lys Leu Val Asp Ser
130 135 140

Leu Lys Glu Lys Glu Lys Leu Leu Lys Glu Glu Asn Gln Gly Leu Ala
145 150 155 160

Ser Gln Met Glu Lys Asn Asn Leu Ala Gly Ala Glu Ala Asp Lys Met
165 170 175

Glu Met Ser Pro Gly Gln Ile Ser Asp Ile Asn Arg Pro Val Thr Leu
180 185 190

Arg Leu Leu Tyr
195

<210> 25

<211> 197

<212> PRT

<213> Brassica napus

<400> 25

Met Gly Arg Lys Lys Leu Glu Ile Lys Arg Ile Glu Asn Lys Ser Ser
1 5 10 15

Arg Gln Val Thr Phe Ser Lys Arg Arg Asn Gly Leu Ile Glu Lys Ala
20 25 30

Arg Gln Leu Ser Val Leu Cys Asp Ala Ser Val Ala Leu Leu Val Val
35 40 45

Ser Ala Ser Gly Lys Leu Tyr Ser Phe Ser Ser Gly Asp Asn Leu Val
50 55 60

Lys Ile Leu Asp Arg Tyr Gly Lys Gln His Asp Asp Asp Leu Lys Ala
65 70 75 80

Leu Asp Arg Gln Ser Lys Ala Leu Asp Cys Gly Ser His His Glu Leu
85 90 95

Leu Glu Leu Val Glu Ser Lys Leu Glu Glu Ser Asn Val Asp Asn Val
100 105 110

Ser Val Gly Ser Leu Val Gln Leu Glu Glu His Leu Glu Asn Ala Leu
115 120 125

Ser Val Thr Arg Ala Arg Lys Thr Glu Leu Met Leu Lys Leu Val Glu
130 135 140

Asn Leu Lys Glu Lys Glu Lys Leu Leu Glu Glu Glu Asn His Val Leu
145 150 155 160

Ala Ser Gln Met Glu Lys Ser Asn Leu Val Arg Ala Glu Ala Asp Asn
165 170 175

Met Asp Val Ser Pro Gly Gln Ile Ser Asp Ile Asn Leu Pro Val Thr
180 185 190

Leu Pro Leu Leu Asn
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<211> 196

<212> PRT

<213> Arabidopsis thaliana

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Arg Gln Val Thr Phe Ser Lys Arg Arg Asn Gly Leu Ile Asp Lys Ala
20 25 30

Arg Gln Leu Ser Ile Leu Cys Glu Ser Ser Val Ala Val Val Val Val
35 40 45

Ser Ala Ser Gly Lys Leu Tyr Asp Ser Ser Ser Gly Asp Asp Ile Ser
50 55 60

Lys Ile Ile Asp Arg Tyr Glu Ile Gln His Ala Asp Glu Leu Arg Ala
65 70 75 80

Leu Asp Leu Glu Glu Lys Ile Gln Asn Tyr Leu Pro His Lys Glu Leu
85 90 95

Leu Glu Thr Val Gln Ser Lys Leu Glu Glu Pro Asn Val Asp Asn Val
100 105 110

Ser Val Asp Ser Leu Ile Ser Leu Glu Glu Gln Leu Glu Thr Ala Leu
115 120 125

Ser Val Ser Arg Ala Arg Lys Ala Glu Leu Met Met Glu Tyr Ile Glu
130 135 140

Ser Leu Lys Glu Lys Glu Lys Leu Leu Arg Glu Glu Asn Gln Val Leu
145 150 155 160

Ala Ser Gln Met Gly Lys Asn Thr Leu Leu Ala Thr Asp Asp Glu Arg
165 170 175

Gly Met Phe Pro Gly Ser Ser Ser Gly Asn Lys Ile Pro Glu Thr Leu
180 185 190

Pro Leu Leu Asn
195

<210> 27

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<213> Arabidopsis thaliana

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Met Gly Arg Lys Lys Val Glu Ile Lys Arg Ile Glu Asn Lys Ser Ser
1 5 10 15

Arg Gln Val Thr Phe Ser Lys Arg Arg Asn Gly Leu Ile Glu Lys Ala
20 25 30

Arg Gln Leu Ser Ile Leu Cys Glu Ser Ser Ile Ala Val Leu Val Val
35 40 45

Ser Gly Ser Gly Lys Leu Tyr Lys Ser Ala Ser Gly Asp Asn Met Ser
50 55 60

Lys Ile Ile Asp Arg Tyr Glu Ile His His Ala Asp Glu Leu Glu Ala
65 70 75 80

Leu Asp Leu Ala Glu Lys Thr Arg Asn Tyr Leu Pro Leu Lys Glu Leu
85 90 95

Leu Glu Ile Val Gln Ser Lys Leu Glu Glu Ser Asn Val Asp Asn Ala
100 105 110

Ser Val Asp Thr Leu Ile Ser Leu Glu Glu Gln Leu Glu Thr Ala Leu
115 120 125

Ser Val Thr Arg Ala Arg Lys Thr Glu Leu Met Met Gly Glu Val Lys
130 135 140

Ser Leu Gln Lys Thr Glu Asn Leu Leu Arg Glu Glu Asn Gln Thr Leu
145 150 155 160

Ala Ser Gln Val Gly Lys Lys Thr Phe Leu Val Ile Glu Gly Asp Arg
165 170 175

Gly Met Ser Trp Glu Asn Gly Ser Gly Asn Lys Val Arg Glu Thr Leu
180 185 190

Pro Leu Leu Lys
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<210> 28

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<213> Arabidopsis thaliana

<400> 28

Met Gly Arg Arg Lys Val Glu Ile Lys Arg Ile Glu Asn Lys Ser Ser
1 5 10 15

Arg Gln Val Thr Phe Ser Lys Arg Arg Lys Gly Leu Ile Glu Lys Ala
20 25 30

Arg Gln Leu Ser Ile Leu Cys Glu Ser Ser Ile Ala Val Val Ala Val
35 40 45

Ser Gly Ser Gly Lys Leu Tyr Asp Ser Ala Ser Gly Asp Asn Met Ser
50 55 60

Lys Ile Ile Asp Arg Tyr Glu Ile His His Ala Asp Glu Leu Lys Ala
65 70 75 80

Leu Asp Leu Ala Glu Lys Ile Arg Asn Tyr Leu Pro His Lys Glu Leu
85 90 95

Leu Glu Ile Val Gln Ser Lys Leu Glu Glu Ser Asn Val Asp Asn Val
100 105 110

Ser Val Asp Ser Leu Ile Ser Met Glu Glu Gln Leu Glu Thr Ala Leu
115 120 125

Ser Val Ile Arg Ala Lys Lys Thr Glu Leu Met Met Glu Asp Met Lys
130 135 140

Ser Leu Gln Glu Arg Glu Lys Leu Leu Ile Glu Glu Asn Gln Ile Leu
145 150 155 160

Ala Ser Gln Val Gly Lys Lys Thr Phe Leu Val Ile Glu Gly Asp Arg
165 170 175

Gly Met Ser Arg Glu Asn Gly Ser Gly Asn Lys Val Pro Glu Thr Leu
180 185 190

Ser Leu Leu Lys
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<213> Arabidopsis thaliana

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Arg Gln Val Thr Phe Cys Lys Arg Arg Asn Gly Leu Met Glu Lys Ala
20 25 30

Arg Gln Leu Ser Ile Leu Cys Glu Ser Ser Val Ala Leu Ile Ile Ile
35 40 45

Ser Ala Thr Gly Arg Leu Tyr Ser Phe Ser Ser Gly Asp Ser Met Ala
50 55 60

Lys Ile Leu Ser Arg Tyr Glu Leu Glu Gln Ala Asp Asp Leu Lys Thr
65 70 75 80

Leu Asp Leu Glu Glu Lys Thr Leu Asn Tyr Leu Ser His Lys Glu Leu
85 90 95

Leu Glu Thr Ile Gln Cys Lys Ile Glu Glu Ala Lys Ser Asp Asn Val
100 105 110

Ser Ile Asp Cys Leu Lys Ser Leu Glu Glu Gln Leu Lys Thr Ala Leu
115 120 125

Ser Val Thr Arg Ala Arg Lys Thr Glu Leu Met Met Glu Leu Val Lys
130 135 140

Thr His Gln Glu Lys Glu Lys Leu Leu Arg Glu Glu Asn Gln Ser Leu
145 150 155 160

Thr Asn Gln Leu Ile Lys Met Gly Lys Met Lys Lys Ser Val Glu Ala
165 170 175

Glu Asp Ala Arg Ala Met Ser Pro Glu Ser Ser Ser Asp Asn Lys Pro
180 185 190

Pro Glu Thr Leu Leu Leu Lys
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<213> Arabidopsis thaliana

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Met Gly Arg Arg Arg Val Glu Ile Lys Arg Ile Glu Asn Lys Ser Ser
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Arg Gln Val Thr Phe Cys Lys Arg Arg Asn Gly Leu Met Glu Lys Ala
20 25 30

Arg Gln Leu Ser Ile Leu Cys Gly Ser Ser Val Ala Leu Phe Ile Val
35 40 45

Ser Ser Thr Gly Lys Leu Tyr Asn Ser Ser Ser Gly Asp Ser Met Ala
50 55 60

Lys Ile Ile Ser Arg Phe Lys Ile Gln Gln Ala Asp Asp Pro Glu Thr
65 70 75 80

Leu Asp Leu Glu Asp Lys Thr Gln Asp Tyr Leu Ser His Lys Glu Leu
85 90 95

Leu Glu Ile Val Gln Arg Lys Ile Glu Glu Ala Lys Gly Asp Asn Val
100 105 110

Ser Ile Glu Ser Leu Ile Ser Met Glu Glu Gln Leu Lys Ser Ala Leu
115 120 125

Ser Val Ile Arg Ala Arg Lys Thr Glu Leu Leu Met Glu Leu Val Lys
130 135 140

Asn Leu Gln Asp Lys Glu Lys Leu Leu Lys Glu Lys Asn Lys Val Leu
145 150 155 160

Ala Ser Glu Val Gly Lys Leu Lys Lys Ile Leu Glu Thr Gly Asp Glu
165 170 175

Arg Ala Val Met Ser Pro Glu Asn Ser Ser Gly His Ser Pro Pro Glu
180 185 190

Thr Leu Pro Leu Leu Lys
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24

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25

<210> 39

<211> 34

<212> DNA

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34

<210> 40

<211> 35

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<213> Artificial

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<210> 42

<211> 35

<212> DNA

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<220>

<223> synthesised DNA primer

<400> 42

ctagtggtag cggtgatgat ggtggctaata tgagc

35